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<i>Species</i>	<i>Specimens wanted from</i>
GROSSULARIACEAE	
<i>Ribes lacustre</i> (Pers.) Poir.	Northern N. Y.
<i>Ribes glandulosum</i> Grauer. ( <i>R. prostratum</i> L'Her.)*	Pa. & N. Y.
<i>Ribes americanum</i> Mill. ( <i>R. floridum</i> L'Her.)	Northern N. Y. and N. J.
<i>Ribes triste</i> Pall. ( <i>R. rubrum</i> L.)	N. J. and N. Y.
<i>Grossularia hirtella</i> (Michx.) Spach. ( <i>R. huronense</i> Rydb.)	N. J. and Pa.
<i>Grossularia</i> ( <i>Ribes</i> ) <i>Cynosbati</i> (L.) Mill.	Northern N. J., N. Y., and Pa.
PLATANACEAE	
<i>Platanus occidentalis</i> L.	Ulster, Greene, and Delaware counties, N. Y.
NEW YORK BOTANICAL GARDEN.	

## REVIEWS

## The Plant Life of Maryland†

There are very few states in the Union whose vegetation has been described with any pretense of thoroughness, and in Maryland not even a catalogue of the vascular plants of the whole state had been published before; probably chiefly because the state contains very few rare and perhaps no endemic species, and therefore offers little attraction to the average systematic botanist. Maryland is the northernmost state, south of the glaciated region, which extends all the way from the coast to the mountains (and incidentally probably the only one which contains both *Taxus minor* and *Taxodium*, or *Pinus Taeda* and

\*The names used are those maintained in North American Flora 22: 193-209. 1908. The ones in brackets are those in Britton's manual.

†The Plant Life of Maryland. By Forrest Shreve, M. A. Chrysler, Frederick H. Blodgett and F. W. Besley. Special publication Maryland Weather Service, new series, Vol. 3, 533 pp., 39 plates (including 1 map), 15 text-figures (including 12 maps). Baltimore, 1910.

Abstracts or reviews of it have already appeared in Science II. 32: 837-868. Dec. 16, 1910; Forestry Quarterly 8: 484-486. 1911; and Scottish Geographical Magazine 27: 1-6. f. 1-4. Jan., 1911.

*Larix*). Although comparatively small in area, it includes parts of such distinct physiographic provinces as the coastal plain, the Piedmont region, and the Alleghany mountains, the last reaching altitudes within the state of over 3000 feet; and the present work throws much light on the local distribution of the plants characteristic of each of these areas, or of two or more of them, and is an important contribution to existing knowledge of the vegetation of eastern North America.

After being delayed considerably beyond the expected time of appearance, as is very often the case with important scientific works, this handsome royal octavo volume, embodying the results of field work which was done mostly in the years 1904-6, was finally given to the public about the middle of last summer, the exact date not being known.

In mechanical make-up the book is fully up to the standard of other recent scientific publications of the state of Maryland, which means that it is practically faultless. The type is large and neat, and the 74 half-tone illustrations of vegetation are well chosen and skillfully executed in nearly every case, the principal exception being that one or two of them are a few degrees out of plumb.\*

The principal author and one of the others having been absent from the state and largely engrossed with other matters during the printing, it fell to the lot of Mr. E. W. Berry as editor to bring the several contributions into harmony with each other as far as possible, and to attend to numerous other essential details; a kind of work which can hardly be appreciated by the reader, as it attracts attention only when poorly done:†

Besides the preface, indexes, and other necessary appendages, the book is divided into Part 1, Introduction, 42 pages; Part 2,

\* This is a defect often observed in the best magazines, both popular and scientific, and even in text-books; but there would seem to be little excuse for it, as it lies within the power of author, editor, and engraver, each and severally, to remedy it before it is too late.

† The reviewer notes with gratification the editor's independence of an autocratic band of geographical orthographers located about forty miles from him, in spelling the names of the three counties which have possessive endings according to local and official usage, and not according to arbitrary rules.

Floristic plant geography, 30 pages; Part 3, Ecological plant geography, 192 pages; Part 4, Relation of natural vegetation to crops, 9 pages; Part 5, Agricultural features, 53 pages; Part 6, Forests and their products, 17 pages; and Part 7, List of plants, 114 pages. In all of these parts a three-fold division of the state on physiographic grounds (and not climatic, as one might be led to expect from the auspices under which the book appeared) into coastal zone (coastal plain), midland zone (metamorphic or crystalline rocks), and mountain zone (Alleghany plateau) is recognized. The coastal zone is further subdivided by Chesapeake Bay into two perceptibly different parts, and the midland zone into lower and upper (or foot-hills and ridges), corresponding with the Piedmont region and Blue Ridge of the states farther south.

Part 1, by Dr. Shreve, outlines the scope of the work, making a sharp distinction between floristic and ecological plant geography (a point which deserves more attention than has been given to it in the past), and then discusses the climatology, topography, mineralogy, and soils of the state.

Part 2, also by Dr. Shreve, opens with a brief sketch of the history of botanical exploration in Maryland, up to the time when the present authors took the field. Then follow lists of plants which are supposed to be confined to a single zone or to two adjacent zones, plants which reach their northern limits on or near the Delaware peninsula, strand plants, salt-marsh plants, pine-barren plants which seem to skip Maryland, etc. If the systematic list (part 7) represents fully the authors' knowledge of the local distribution of plants within the state, then some of the zonal lists might have been considerably modified or extended. But discrepancies of this kind are almost inevitable in such a large book, in which considerable time must elapse between the writing of the various parts. Kearney's table of the northern limits of "austroriparian" plants, although mentioned approvingly in a footnote on page 93, was apparently not utilized to the utmost in preparing the list of plants whose northern limits pass through Maryland. The list of "pine-barren" plants which are not known between New Jersey and

Virginia is somewhat misleading in that it includes at least half a dozen species which in the southern states are known only in the mountains, and not in the coastal plain, and one or two whose occurrence northeast of Maryland is doubtful. (It is interesting to note that nearly half of the 44 spermatophytes listed as pine-barren plants are monocotyledons, and the proportion would be still larger if the corrections just indicated had been made.) This part closes with an instructive discussion of the factors by which vegetation provinces are differentiated, and a bibliography of works relating to the flora of Maryland and the District of Columbia.

In Part 3, the longest and most important of all, the vegetation of each of the five subdivisions of the state is classified by habitat; Dr. Shreve taking the easternmost, middle and westernmost, Dr. Chrysler the "Western Shore" (that part of the coastal plain west of the Bay), and Dr. Blodgett the upper midland zone.

In the habitat lists prepared by Dr. Shreve, the species, instead of being arranged in taxonomic, alphabetical, or merely haphazard order, as was customary up to four or five years ago (and is yet, to a considerable extent), are divided into trees, shrubs, and herbs (bryophytes and thallophytes being left out of consideration), and arranged in approximate order of abundance (as stated in a rather inconspicuous way in a footnote on page 110). Unfortunately in such lists the trees are mentioned only by their common names, and these are run into paragraphs instead of being arranged in columns like those of the herbs, which makes this part less valuable for purposes of reference than it should be. In order to find from the index all that is said in the book about any particular species of tree its common name has to be constantly borne in mind. The names of the herbs are sometimes run into paragraphs too, but in most cases they are arranged in single columns, thus wasting considerable space which might easily have been filled with condensed information about the structure and adaptations, or even the geographical distribution, of each species. If smaller and more closely set type or double columns had been used for the herbs each habitat list would have been confined to one or two pages, and thus

more easily comprehended at a single glance. These details however were probably not left entirely to the judgment of the authors.

In Dr. Chrysler's part some definite ratios of abundance are given for the trees in certain habitats, but the herbs in most of his lists seem to be arranged in Engler & Prantl sequence, with no indication of relative abundance. Dr. Blodgett had to deal with a rather complex region, in which he found it expedient to describe almost every ridge and valley separately, and to mix trees, shrubs, and herbs together in his habitat lists, as if in the same order in which they were observed in the short time available for field work in that region.

The chapter on agricultural features (Part 5), by Dr. Blodgett, although it seems a little out of place in a volume devoted primarily to phytogeography, is a valuable original contribution to economic geography. After the history of settlement and agricultural development of the state there follows a discussion of the influence of soils on civilization, and then notes on the distribution of several of the principal crops, illustrated by maps.

Mr. Besley's remarks on forests (Part 6) are rather brief, but it would be hard to cover the ground any better than he did with the same number of words, and the forest industries of Maryland are probably not important enough at the present time to justify a more exhaustive treatment.

In preparing the list of plants collected and observed, Dr. Shreve did not waste any time ransacking old herbaria with a view of citing every specimen ever collected in Maryland, but included only plants which had been seen by him or his associates or by local botanists still living in the state. The list therefore makes no claim to completeness, but is primarily a taxonomic index to the plants which are classified by habitat in Part 3.

The nomenclature follows Britton & Brown's *Illustrated Flora* (1896-1898), and all specific names are decapitalized, as has been customary in Washington since 1893, but not so much elsewhere. Numerous arbitrary "common" names which are never seen outside of botanical literature have been inserted in the catalogue, but this practice is not carried to the extreme that it

was in some quarters a decade or two ago, for many of the less familiar species are left without such names. Ranges and bibliographic citations or other references to literature are omitted, which is entirely justifiable in such an unpretentious catalogue and in a region so well covered by descriptive manuals.

The information given about the distribution of the several species within the state is not as complete as an interested reader might wish, only about two lines (besides the name) being devoted to each, on the average, and usually not more than one county being mentioned. For over one-fourth of the species the catalogue gives no indication whatever of habitat, and a still larger number are treated in very general terms, like "swamps," "dry open situations," etc., which are not readily correlated with the habitats described in detail in Part 3. It would not be fair, however, to compare such a list with those numerous local floras in which a taxonomic catalogue is the most important feature.

Throughout the catalogue, as well as in other parts of the book, weeds are not distinguished very sharply from native plants, which is unfortunate, though not at all unusual. Weeds are more easily recognized than some persons who have not given the matter much thought may imagine, and a reform in this respect is urgently needed in all our phytogeographical literature.

An extremely conservative course has been followed with regard to the numerous recently described (and perhaps ill-defined?) species of *Panicum*, *Sisyrinchium*, *Rubus*, *Crataegus*, *Viola*, etc., the five genera just named having only 56 species among them in the book.

The catalogue comprises 60 pteridophytes, 13 gymnosperms, 384 monocotyledons, and 980 dicotyledons, or 1437 species and varieties of vascular plants. About 28.2 per cent. of the angiosperms (counting both native and introduced species, for they are not separated) are monocotyledons, which seems to show that the vegetation of Maryland is on the whole considerably nearer the climax condition than that of New Jersey, and farther from it than that of Pennsylvania.

In the general index the only persons mentioned are those whose names occur on the first 20 pages. About 75 others, many of whom are shown in the text to have made important contributions to the knowledge of the Maryland flora, are omitted. This perhaps should not be charged up to the authors, however. The botanical index seems to be complete, except for the plants mentioned on pages 86, 87, and 385 (and these are the ones excluded from the state flora), and in the footnotes on page 164 and in the catalogue.\*

With the few exceptions here noted, the *Plant Life of Maryland* is a model of its kind, and it easily ranks among the foremost of existing local phytogeographical works. It is to be hoped that botanists in other states, especially those whose vegetation has not yet been systematically described, will soon follow the splendid example set by Dr. Shreve and his associates.

ROLAND M. HARPER.

#### **Apgar's Ornamental Shrubs of the United States**

In criticising a book we must look at it from the standpoint of the author. The late Mr. Apgar has fully informed us in the preface that his aim has been to produce a work that will reach "that large public who wish to know by name the attractive shrubs cultivated in parks and private grounds, but who are actually afraid of anything called botany." Viewed from this frank avowal of its purpose, the little book before us will fill the need of a large number of people who have not an extended knowledge of botany and its terms. What terms the author has found it necessary to use have been fully explained in the first part of the work and in the glossary at the end. The primary classification is based upon the form and position of the leaves, when these are present; or in their absence keys are provided for deciduous-leaved shrubs, and for thorny or spiny

\*Although the present work is not a good illustration of the point, it might not be out of place to remark here that indexing is too often regarded as a mere mechanical process, requiring no intelligence or discretion, and delegated by the author to persons who have no interest in his work.

†Apgar, A. C. *Ornamental Shrubs of the United States* (Hardy, Cultivated). Pp. 1-352. *pl.* 1-4. *f.* 1-621. American Book Co. Price \$1.50.